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STATE OF WASHINGTON

DEPARTMENT OF ECOLOGY

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November 24, 1989

Ms. Deborah Hankins
Manager - Remedial Projects
Corporate Environmental Programs
General Electric Company
Embarcadero Center West
275 Battery Street, 23rd Floor,
San Francisco, CA 94111

Re: General Electric Apparatus Service Shop
East 4323 Mission Ave., Spokane, WA

Dear Ms. ~~Hankins~~ Deborah:

Thank you for your recent letter dated November 14, 1989 conveying your understanding and preference regarding completion of the agreed order.

GE's documentation in support of various proposed site activities was received on November 21, 1989. In general, information on the proposed shallow soils removal has been submitted prematurely. It will be reviewed to the extent that it applies to interim actions as set forth in this letter or to the final cleanup remedy. As we discussed at our meeting on November 9, 1989, Ecology will not permit the proposed soil removal to occur as an "independent action" given the history of this site and Ecology's on-going involvement. Ecology's first priority will be completion of the pending agreed order so that any necessary interim actions can take place as soon as possible.

Information submitted along with the above documentation that concerns on-site storage of contaminated materials and application of vitrification to concrete has been reviewed and is addressed in this letter.

Ecology has determined that a single agreed order providing for completion of the remedial investigation (RI) and feasibility study (FS) portion of the site cleanup will be required. Completion of a RI/FS that evaluates the entire site is generally the best approach before determining cleanup remedies. However, in recognition of GE's interest in remediating the shallow soil contamination earlier in the process, Ecology has determined that cleanup alternatives will be evaluated for the shallow and deep soils, buildings, and utilities as the first phase of the FS. This will expedite selection of a cleanup remedy for these materials and still address closely associated aspects of site contamination in a comprehensive fashion. Dividing

the scope of the FS further could unnecessarily limit potential cleanup options. A second phase of the FS will address cleanup alternatives for ground water contamination.

The Phase 1 FS will address cleanup alternatives for:

- o contaminated shallow soils;
- o contamination beneath and surrounding any utilities (dry wells, sumps, pits, tanks, overflow and outlet pipes, drainlines, drainfields, and associated structures);
- o contaminated portions of the service shop building, foundation, and asphalt paving;
- o contaminated portions of the north warehouse;
- o contaminated deep soils beneath the west dry well;
- o and all other associated contaminated material/debris.

The Phase 2 FS will address cleanup alternatives for:

- o ground water,
- o and contaminated soils related to ground water table fluctuations.

The Phase 2 FS and related investigations will require the majority of the time needed to complete the RI/FS. Investigations for the Phase 2 FS should not significantly delay implementation of a Phase 1 cleanup.

Interim Actions

In-situ vitrification (ISV) of the west dry well does not meet the intent of interim actions under the proposed Model Toxics Control Act (MTCA) regulations (WAC 173-340-430). Proposed actions that could be considered interim include: building demolition for access to the west dry well and on-site stockpiling; relocation of equipment, debris, and materials which are non-contaminated from potentially contaminated areas to a clean portion of the site; installation of additional fencing; and removal of the transformer oil tank. All interim actions will be subject to work plan submittal requirements and Ecology approval.

GE's Proposal

Ecology understands the basis for GE's position that the contaminated shallow soils and structures should be removed for landfill disposal in a "fast track" (two years representing the "regular track") mode to be related to the following items:

1. a need to remove the service shop building to facilitate additional investigative drilling in the west dry well area and to facilitate staging of ISV equipment;

2. GE's position that removal of contaminated shallow soil is necessary prior to ISV of the west dry well;

3. GE's position that there is insufficient storage area to stockpile contaminated soils or buildings on-site once excavated or demolished;

4. regulatory requirements regarding stockpiling contaminated material on the site;

5. the ISV supplier's application for its TSCA permit, the supplier's commitment of equipment to this project, and that the submittal of a Demonstration Test Plan for this site is imminent (with a demonstration permit available three months after submittal);

6. GE's interest in using the technical information obtained from the proposed ISV demonstration for potential near-term application at other sites;

7. concern over potential public health effects if the contaminated surface material remains on-site for up to 2 years.

Ecology's Response

Our response is detailed below and is numbered to correspond with the above items:

1. The need for additional access over the west dry well appears reasonable and can be accommodated without off-site removal of the service shop building as discussed in response 3 and 4 below.

2. Ecology has not been provided with adequate rationale for why contaminated shallow soils need to be removed to conduct ISV of the west dry well, or given Ecology's approach outlined above, prior to completion of the Phase 1 FS. GE has provided the explanation that access via soil excavation and removal is needed surrounding and beneath various utilities and structures to more fully determine the extent of contamination. GE has proposed a follow-up FS to address any residual contamination that remains after the proposed removal. GE's approach to completing characterization of these areas in a practical sense amounts to a final cleanup, since all contaminated soils are expected to be removed. Ecology has determined that GE must conduct the comprehensive Phase 1 FS prior to implementing cleanup actions of this scope.

3. and 4.

GE has submitted the document "Feasibility Evaluation for On-site Storage of Contaminated Demolition Debris and Shallow Soils at the Former General Electric Spokane Facility, November 20, 1989" in support of its assertion that on-site stockpiling of soils or building demolition debris is not feasible. Storage is necessary only for material and debris generated by demolition of the service shop building. Based on this report there is adequate storage. GE estimates that there is storage capacity for at least 1500 cubic yards. The service shop represents less than 500 cubic yards (a figure which also includes contaminated demolition debris not part of the service shop), leaving the remainder of the storage area for use as a clean laydown and staging area. The TSCA regulation limiting storage to one year should be achievable under a Phase 1 cleanup.

5. and 6.

Ecology appreciates the importance of GE's permit goals and its interest in applying the ISV technology to other sites, however, Ecology does not believe these considerations merit a "fast track" approach for this site at the expense of potential benefits that may be obtained from a comprehensive Phase 1 FS. Although the Phase 1 FS is not on a "fast track" it can be completed within a time frame considerably less than the two years which GE estimates is needed for completion of the entire RI/FS.

7. Ecology has found no basis to support GE's current assertion that the public may raise legitimate health based concerns if "fast track" removal of the contaminated shallow soils is not conducted. According to GE's November 17, 1988 response (item no. 29) to a health issue raised by Ecology, GE stated:

"...For this reason, site risks from dermal exposure or soils ingestion are virtually nonexistent. Further, the high affinity of Aroclor 1260 for site soils indicates that inhalation of PCB-containing soils/dust to be the major pathway of potential concern. And calculations detailed later in this section indicates that even these risks are de minimis...

... Based upon the above general discussion and GE's specific plans to implement additional measures to control site access as well as to pave over portions of the access road, it follows that exposure scenarios involving oral ingestion of and/or dermal exposure to PCB-containing soils--often major exposure pathways in site risk analyses--are simply not realistic and do not need

to be considered in any health evaluation of risks at the Mission Avenue site...

...For the present, however, and throughout any conceivable time frame for site remediation, credible exposure scenarios do not involve oral ingestion of soils nor dermal contact...

...These calculations indicate clearly that risks associated with exposure to wind-generated PCB-containing particulates are well beneath any possible site remediation threshold and can truly be termed de minimis...

...GE is confident that the present risks associated with this site are very small."

The above statements do not correspond with GE's recently stated concern regarding possible public health effects if a "fast track" approach is not used. If GE has additional substantive information regarding potential health hazards that it has not submitted, please provide that information as soon as possible.

Ecology contacted the Washington State Department of Health and the Agency for Toxic Substances and Disease Registry (ATSDR) to help determine which one of GE's positions is technically sound. Mr. Don Oliver, Hazardous Waste Program Coordinator, of the Department of Health and Mr. Greg Thomas, Regional Consultant, with ATSDR have indicated that on the basis of ATSDR's draft Preliminary Health Assessment (without necessarily endorsing any of the assumptions or conclusions of GE's November 17, 1988 response to Ecology) and given the present site conditions, the shallow soils do not present an urgent public health concern. They have agreed to review pertinent information further and provide a written evaluation.

Ecology believes it is in the interest of the public health to conduct a comprehensive Phase 1 FS that adequately evaluates applicable cleanup alternatives.

Draft FS - Shallow Soil Removal

Ecology has reviewed the draft document "Feasibility Study for the Independent Action at the Former General Electric Spokane Facility, November 1989." General comments are provided below since portions of this document may be incorporated into the Phase 1 FS.

1. The following technologies or approaches need to be explored or evaluated further:

- o the feasibility of vitrifying contaminated shallow soils, building materials and/or debris in trenches in conjunction with in-situ vitrification of the west dry well;

- o the feasibility of mixing contaminated concrete, asphalt and/or building materials with contaminated soils in trenches for vitrification (The Geosafe Corporation letter dated November 18, 1989 does not adequately address the question of feasibility. Ecology agrees that vitrification of concrete slabs by themselves would not be a prudent application of the vitrification process. Gaps between slabs can be addressed by breaking up the concrete sufficiently so that it can be mixed with soil for placement in trenches to be vitrified. The presence of steel reinforcing bar and its potential to short out the vitrification process was the explanation previously offered by GE for why vitrification of concrete is not feasible. Ecology understands the process to be capable of incorporating a percentage of metals without adverse effects. It should be determined if the estimated concentration of steel in the concrete at the site surpasses this limit and if it does what mechanisms are available to separate the steel from the concrete.);

- o the feasibility of applying the soil washing method to the shallow soils using water as the solvent to separate out the the coarse material (under study by EPA's Hazardous Waste Engineering Laboratory) and then vitrifying the remainder in trenches as above;

- o the feasibility of advanced electrical reactor technology.

2. Greater detail needs to be provided regarding the costs of cleanup alternatives. Assumptions upon which costs are based need to be stated.

3. In general, additional supporting information is needed for individual designations (A, B, C) chosen to rank specific criterion.

   Landfill disposal as a cleanup remedy for contaminated material at the site is in potential conflict with the MTCA. Section 3(1)(b) of the MTCA states that the department shall give preference to permanent solutions to the maximum extent practicable. The proposed MTCA regulations (WAC 173-340-360) further state that the off-site transport and disposal of hazardous substances or contaminated materials without treatment is the least favored alternative cleanup action where practicable treatment technologies are available. It should be explicitly stated how the FS ranking system gives preference to permanent

solutions and factors in the least-favored alternative status of off-site transport and disposal.

4. Applicable and relevant and appropriate requirements need to be evaluated in detail for each alternative. Since the cleanup is being conducted under the MTCA there are currently no permit exemptions for this site, even though it is a federal superfund site.

5. Community acceptance will, as stated, require greater evaluation following public comment.

Miscellaneous

An additional section will be included in the agreed order providing for submittal of progress reports by GE since overall time frames are significantly longer than initially indicated.

Greg Thomas and a representative from the Department of Health need to tour the site to follow up their March 7, 1989 site inspection and confirm that issues of concern were resolved. Access to the inside of the service shop will be necessary. We will need to visit the site during the week of December 4th or December 11th to ensure that the final version of ATSDR's Preliminary Health Assessment accurately documents the current situation at the site. I will call you to make the necessary arrangements.

Lee Rees will forward to Dan Ballbach a copy of the agreed order which will reflect the contents of this letter, as well as other changes that they have discussed. In the interest of moving ahead Ecology would like to come to agreement on the agreed order by December 15th. I will be out of the office until December 4th. If you have any questions during the time I am out please call Carol Kraege at (206) 438-3054.

Sincerely,

Brad J. Ewy

Brad J. Ewy, Site Manager
Hazardous Waste Investigations
and Cleanup Program

cc: Mike Gallagher
Lee Rees
Dan Ballbach
Don Oliver
Greg Thomas